

CLAIMS

1. Communication terminal comprising a speaker and a low profile built-in radio antenna element, characterised in that said antenna element comprises a flat sheet
5 (21) carrying a conductive antenna trace (22), and where an exciter (26) is connected to said sheet and devised to induce vibrations therein for generating sound.
2. The communication terminal as recited in claim 1, characterised in that said
10 sheet is made from an insulating material.
3. The communication terminal as recited in claim 2, characterised in that said sheet is made from a plastic material.
- 15 4. The communication terminal as recited in claim 2, characterised in that said sheet is made from a ceramic material.
5. The communication terminal as recited in claim 1, characterised in that said exciter is connected adjacent to a side edge of said antenna element.
- 20 6. The communication terminal as recited in claim 1, characterised in that said exciter is insulated from said antenna trace.
7. The communication terminal as recited in claim 1, characterised in that said
25 exciter comprises first and second speaker signal connectors (27).
8. The communication terminal as recited in claim 1, characterised in that said antenna trace defines an antenna patch.
- 30 9. The communication terminal as recited in claim 1, characterised in that said antenna trace is connected to a radio feed circuit of the terminal, and to a ground

plane (23) which is spaced from the antenna patch.

10. The communication terminal as recited in claim 1, characterised in that said antenna element is positioned parallel to a ground plane (23), wherein a spacing
5 between the antenna element and the ground plane acts as an electromagnetic resonance cavity.
11. The communication terminal as recited in claim 1, characterised in that a cover member (2) of the terminal comprises an aperture (40) adjacent to said antenna
10 element.
12. The communication terminal as recited in claim 1, characterised in that a sound channel (51,61) extends from a position adjacent to said antenna element to a channel front outlet at a front side of the terminal.
- 15 13. The communication terminal as recited in claim 1, characterised in that said antenna trace comprises a substantially flat pattern of conductive material on said antenna element.
- 20 14. The communication terminal as recited in claim 1, characterised in that said antenna trace is printed on said antenna element.
15. The communication terminal as recited in claim 1, characterised in that said antenna trace is etched out on said antenna element.
- 25 16. Combined antenna and speaker for a radio receiving apparatus, comprising a speaker and a low profile built-in radio antenna element, characterised in that said antenna element comprises a flat sheet (21) carrying a conductive antenna trace (22), and where an exciter (26) is connected to said sheet and devised to induce
30 vibrations therein for generating sound.